

ment, scientific contact, and professional recognition at each stage of their professional lives, they would undoubtedly become more visible.

The lack of encouragement and self-confidence leading to isolation, which then leads to lack of recognition, is a vicious circle that must be broken for the woman professional. This can be done most easily for the beginning student. For older women, there must be increased placement in positions of responsibility and visibility. Protective practices that discourage women from entering arenas of competition can only be viewed as discrimination on the basis of sex, since women professionals are rarely given the choice between being protected and being independent.

Unexpectedly, this study illustrates the lower status of another group of individuals who are considered deviants from the expected roles of the established society—single men with doctorates, who were found in the positions predominately filled by women.

In conclusion, this study of a select group of scientists probably has general

applicability to all women professionals in their roles vis-à-vis men. Examination and documentation of discriminatory practices based on sex points to the areas in which women must direct their demands for equality.

References and Notes

1. Among the approximately 3500 registrants at the meeting in Minneapolis, about 900 answered the questionnaires, 815 of which were sufficiently complete for full analysis. The purpose of the survey was not indicated on the questionnaire. The questionnaire consisted of 40 questions with multiple choice answers. The questions were grouped under headings which related to (i) personal information, (ii) education, (iii) past professional experience, (iv) present professional experience, (v) self-evaluation, and (vi) career decisions of individuals with professional spouses. Answers were first encoded on standard coding sheets and then keypunched, and verified on standard IBM cards. Analysis was done with the aid of an IBM computer, using the set of programs *Statistical Package for the Social Sciences* [N. H. Nie, D. H. Bent, C. H. Hull, (McGraw-Hill, New York, 1970)]. Using the determinants sex, marital status, and doctoral degree for categorizing the respondents into eight groups, the answers to the questionnaires were examined in relation to these groups. Chi-square values were derived to determine the significance (P) of the differences observed among these groups.
2. The data on salary levels and supervisory roles are derived from the 1970 annual membership survey conducted by the American Society for Microbiology [M. L. Robbins, *ASM News* 37, 34 (1971); L. Leive, *ibid.*, p. 57].
3. See *Chem. Eng. News* 50, 34 (1972); P. H. Abelson, *Science* 175, 127 (1972); D. J. Glancy, *Harv. Law Sch. Bull.* 21, 22 (1970); M. S. White, *Science* 170, 413 (1970); A. S. Rossi, *Am. Sociol.* 5, 1 (1970); H. S. Astin, *The Woman Doctorate in America: Origin, Career and Family* (Russell Sage Foundation, New York, 1969); A. Fischer and P. Gold, *Am. Anthropol.* 20, 332 (1968); C. Lopak, *Women in Medicine* (Johns Hopkins Press, Baltimore, 1969); A. E. Bayer and H. S. Astin, *J. Hum. Resour.* 3, 191 (1968); R. J. Simon and E. Rosenthal, *J. AAUW* 60, 127 (1967); A. S. Rossi, in *Women and the Scientific Profession: The M.I.T. Symposium on American Women in Science and Engineering*, J. A. Mattfeld and C. G. Van Aken, Eds. (MIT Press, Cambridge, Mass., 1965), pp. 51-127.
4. *ASM News* 38, 173 (1972).
5. Additional comments were solicited from the respondents, and 62 persons wrote notes on various topics. Ten of the essays dealt with the employment situation in general, 8 contained criticisms of the questionnaire, 13 mentioned bias against applied microbiology in educational institutions and in the questionnaire, 2 had favorable comments on the ASM, and 19 mentioned miscellaneous topics. In addition, 13 essays dealt with discrimination against women in education and jobs: 7 were written by married women doctorates, 1 by a married man doctorate, and the others by single women and female students. The comments included personal testimony on, first, lack of encouragement of female graduate students and, second, the severe impediments to promotion at the higher faculty levels.
6. We wish to express our deep gratitude to Lotte Bailyn and Gertrude Baltimore for their helpful advice and criticisms of this study; to Asger F. Langlykke and the many ASM members for their interest and support; and to Richard Triplett for programming and computation.

An Invitation for Suggestions on Candidates

At the December meeting of the Board of Directors, William Bevan confirmed his decision to resign as Executive Officer of the Association effective 30 September. In response to the announcement of Dr. Bevan's decision, the Board of Directors appointed a committee of three persons to serve as a search committee, consisting of the Board chairman, Leonard Rieser, president Roger Revelle, and president-elect Margaret Mead.

The appointment of a new Executive Officer is of crucial importance to the Association; at the same time it is an extraordinary opportunity for an individual to exercise leadership in the scientific community. The committee invites suggestions of possible candidates and applications from individuals who wish to be considered for the position. Those submitting applications should include a résumé of their experience. Such communications should be addressed to Leonard M. Rieser, Chairman of the Board of Directors, American Association for the Advancement of Science, Dartmouth College, Hanover, New Hampshire 03755.—LEONARD M. RIESER

NEWS AND COMMENT

Eradicating the Boll Weevil: Would It Be a No-Win War?

The boll weevil, bane of the cotton belt for more than half a century, is reported to cause some \$200 to \$300 million in economic losses annually, making it the United States' most im-

portant farm pest. Great amounts of chemicals have been applied just to keep the weevil in check. Indeed, the U.S. Department of Agriculture says that one-third of all insecticides used

in this country on farm crops are used for control of the boll weevil or for control of other pests that would not become problems if chemicals used against the weevil did not also destroy beneficial insects. Eradication of the boll weevil has long been the goal of the cotton industry; and now the industry, supported by some leading USDA entomologists, is pressing to have the government lead a 6- to 10-year campaign intended to rid the cotton belt of this pest for once and for all.

The cost of this campaign would be